

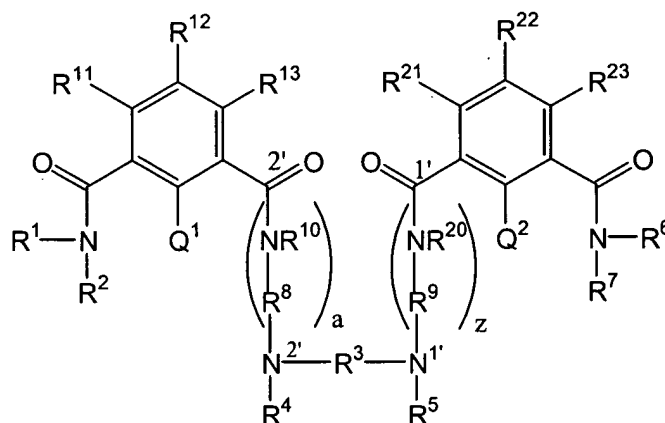
LISTING OF CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application. Please amend the application by amending claims 5, 6, 8, 10-19, 21, 25-27, 30, 36, 37, 46, 48-49, and 61 and canceling claims 9, 10 and 47.

1 1-4. (Cancelled)

1 5. (Presently Amended) A compound having a structure according to

2 Formula I:



3

4 wherein,

5 $R^1, R^2, R^4, R^5, R^6, R^7, R^{10}$ and R^{20} are members independently selected from
6 the group consisting of H, alkyl, ~~and substituted alkyl groups, and polyether,~~

7 wherein, two or more of R^1, R^2, R^4, R^5, R^6 , and R^7 ~~when R^3 is~~

8 ~~substituted alkyl, a substituent of R^3~~ are optionally adjoined by at least one
9 linker moiety to form at least one ring;

10 R^3, R^8 and R^9 are members independently selected from the group consisting of alkyl,
11 substituted alkyl, aryl, ~~and substituted aryl groups, and polyether;~~

12 $R^{11}, R^{12}, R^{13}, R^{21}, R^{22}$ and R^{23} are members independently selected from alkyl,
13 substituted alkyl, H, $-\text{NR}^{14}\text{R}^{15}$, $-\text{NO}_2$, $-\text{OR}^{16}$, $-\text{COOR}^{17}$,

14 wherein, R^{14}, R^{15}, R^{16} and R^{17} are members independently selected
15 from the group consisting of H, alkyl and substituted alkyl, wherein R^{12} can
16 optionally form a ring with R^{11}, R^{13} or both, and R^{22} can optionally form a

ring with R^{21} , R^{23} or both, said rings being members independently selected from the group of ring systems consisting of cyclic alkyl, substituted cyclic alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, ~~heterocyclyl~~ and ~~saturated~~ heterocyclyl ring systems; and

Q^1 is $—OR^{18}$;

Q^2 is $—OR^{19}$,

wherein R^{18} and R^{19} are members independently selected from H, an enzymatically labile group, a hydrolytically labile group and a single negative charge;

a is 0 or 1, with the proviso that when a is 0, $N^{2'}$ is covalently attached directly to carbonyl group 2'.

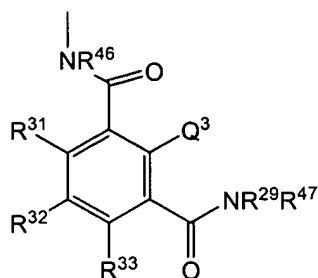
z is 0 or 1, with the proviso that when z is 0, $N^{1'}$ is covalently attached directly to carbonyl group 1'.

6. (Presently Amended) The compound according to claim ~~4~~ 5, wherein z is 0.

7. (Original) The compound according to claim 5, wherein R^3 is a linear C_1 - C_6 hydrocarbon.

8. (Presently Amended) The compound according to claim 6, wherein R^8 is $(CH_2)_P$;
 R^4 is an alkyl group substituted with a moiety having a structure according to

Formula II:



(II)

wherein,

R^{29} , R^{46} and R^{47} are members independently selected from the group consisting of H, alkyl, ~~and substituted alkyl, and polyether, groups~~, wherein, two or more of R^2 , R^7 and R^{29} are optionally adjoined by at least one linker moiety to form at least one ring;

R^{31} , R^{32} and R^{33} are members independently selected from alkyl, substituted alkyl, H, $—NR^{24}R^{25}$, $—NO_2$, $—OR^{26}$, $—COOR^{27}$,

wherein, R^{24} , R^{25} , R^{26} and R^{27} are members independently selected from the group consisting of H, alkyl and substituted alkyl, wherein R^{32} can optionally form a ring with R^{31} , R^{33} or both, said rings being members independently selected from the group of ring systems consisting of cyclic alkyl, substituted cyclic alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, ~~heterocycl~~ and ~~saturated~~ heterocycl ring systems;

R^3 is $(CH_2)_x$;

Q^3 is $—OR^{28}$, wherein R^{28} is a member selected from H, an enzymatically labile group, a hydrolytically labile group and a single negative charge;

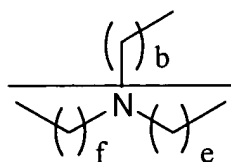
P and X are members independently selected from the group consisting of the integers from 1 to 5, inclusive;

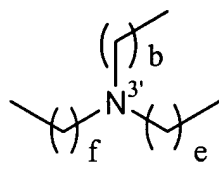
and z is 0.

9. (Cancelled)

10. (Cancelled)

11. (Presently Amended) The compound according to claim 10 ~~8~~, wherein R^2 , R^6 and R^{29} are adjoined by a single linker moiety, wherein said linker moiety has a structure according to Formula III :



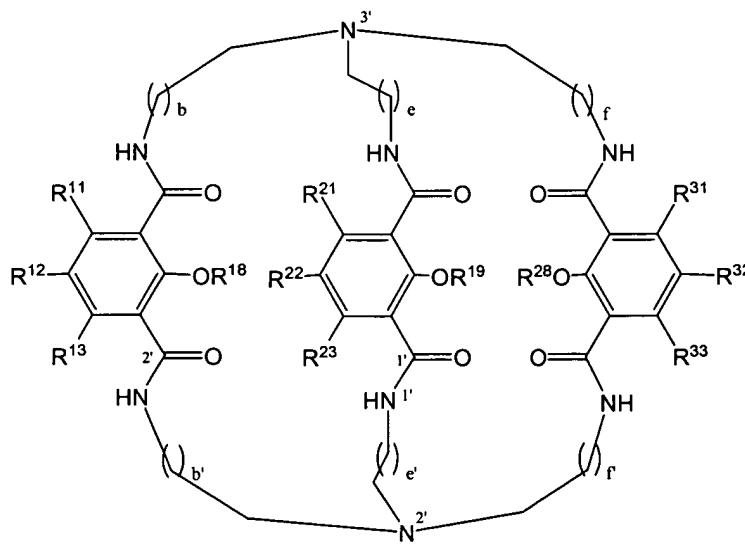
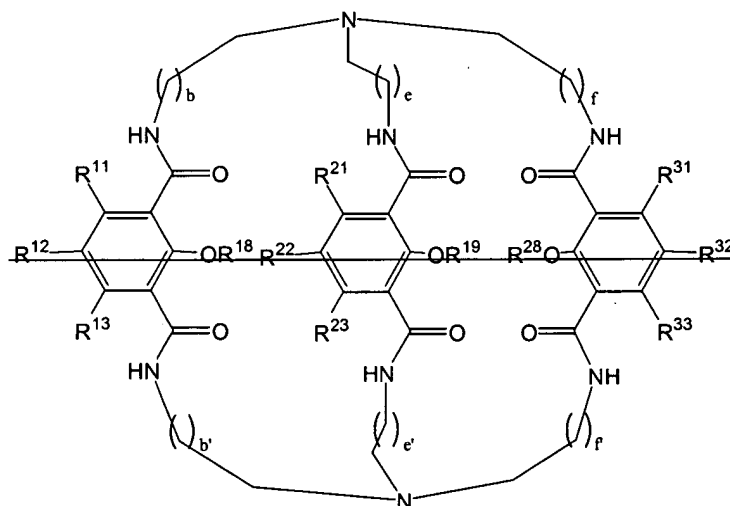


(III)

wherein,

b, e and f are members independently selected from the group consisting of the integers from 1 to 5, inclusive.

12. (Presently Amended) A compound according to claim 11, having a structure according to Formula IV:

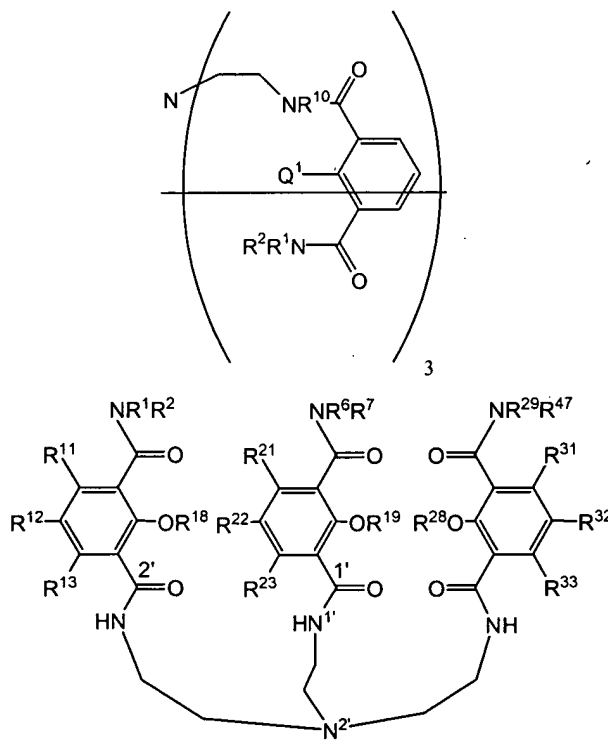


(IV)

wherein,

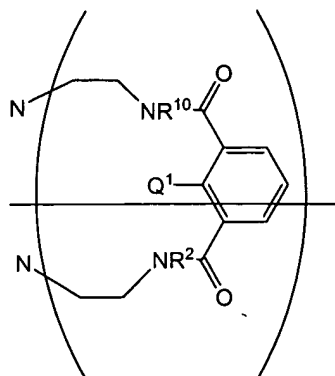
b, b', e, e', f and f' are members independently selected from the group
consisting of the integers from 1 to 5, inclusive.

13. (Presently Amended) A compound according to claim 8, having a
structure according to Formula V:



(V).

14. (Presently Amended) The compound according to claim ~~13~~12,
wherein b, b', e, e', f and f' are 1 ~~having a structure according to Formula VI:~~



(VI).

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1 **15.** (Presently Amended) The compound according to claim 8 wherein,
 2 $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{29}, R^{46}$ and R^{47} are members independently selected from
 3 the group consisting of H, C_1 to C_{10} alkyl and C_1 to C_{10} substituted alkyl; and

4 R^3 is a member independently selected from the group consisting of C_1 to C_{10}
 5 alkyl and C_1 to C_{10} substituted alkyl.

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 $x=1-5$
 $R^3-(CH_2)_x$

1 **16.** (Presently Amended) The compound according to claim 15 wherein,
 2 $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{29}, R^{46}$ and R^{47} are members independently selected from
 3 the group consisting of H, C_2 to C_6 alkyl and C_2 to C_6 substituted alkyl; and

4 R^3 is a member selected from the group consisting of C_2 to C_6 alkyl and C_2 to
 5 C_6 substituted alkyl.

1 **17.** (Presently Amended) The compound according to claim 8, wherein
 2 $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{29}, R^{46}$ and R^{47} are members independently selected from
 3 the group consisting of H, aryl, substituted aryl and combinations thereof; and

4 R^3 is a member selected from the group consisting of aryl, substituted aryl and
 5 combinations thereof.

not defn. in am-8

1 **18.** (Presently Amended) The compound according to claim 8, wherein
 2 $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{29}, R^{46}$ and R^{47} are members independently selected from
 3 the group consisting of H and alkyl substituted with polycyclic aryl groups; and

4 R^3 is an alkyl substituted with polycyclic aryl groups.

↙

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1 **19.** (Presently Amended) The compound according to claim 8, wherein a
2 member selected from the group consisting of R^1 , R^2 , R^5 , R^6 , R^7 , ~~R^8~~ , ~~R^9~~ , R^{10} , R^{29} , R^{46} and R^{47}
3 and combinations thereof is a primary alkyl amine.

1 **20.** (Original) The compound according to claim 19, wherein said primary
2 alkyl amine is a C_1 to C_{10} alkyl chain bearing an amine moiety at the ω -position.

1 **21.** (Presently Amended) The compound according to claim 20, wherein
2 said primary alkyl amine as is a C_2 to C_6 alkyl chain bearing an amine moiety at the ω -
3 position.

1 **22.** (Original) The compound according to claim 8, wherein a member
2 selected from the group consisting of R^1 , R^2 , R^3 , R^5 , R^6 , R^7 , R^8 , R^9 , R^{10} , R^{29} , R^{46} and R^{47} and
3 combinations thereof is a polyether.

1 **23.** (Original) The compound according to claim 22, wherein said
2 polyether is a member selected from ethylene glycol, ethylene glycol oligomers and
3 combinations thereof, wherein said polyether has a molecular weight of from about 60
4 daltons to about 10,000 daltons.

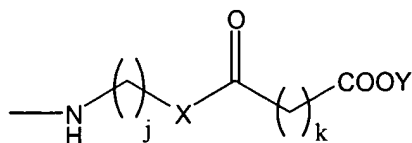
1 **24.** (Original) The compound according to claim 23, wherein said
2 polyether has a molecular weight of from about 100 daltons to about 1,000 daltons.

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1 **25.** (Presently Amended) The compound according to claim 8, wherein a
2 member selected from the group consisting of R^1 , R^2 , R^3 , R^5 , R^6 , R^7 , ~~R^8~~ , ~~R^9~~ , R^{10} , R^{29} , R^{46} and
3 R^{47} comprise a reactive group for conjugating said compound to a member selected from the
4 group consisting of molecules and surfaces.

1 **26.** (Presently Amended) The compound according to claim 8, wherein
2 R^1 , R^2 , ~~R^3~~ , R^5 , R^6 , R^7 , ~~R^8~~ , ~~R^9~~ , R^{10} , R^{29} , R^{46} and R^{47} and combinations thereof are members

3 selected from ω -carboxyl alkyl groups, ω -carboxyl substituted alkyl groups and
4 combinations thereof.

1 **27.** (Presently Amended) The compound according to claim 26, wherein
2 said ω -carboxyl substituted alkyl group has a structure according to Formula VII:



(VII)

4 wherein,

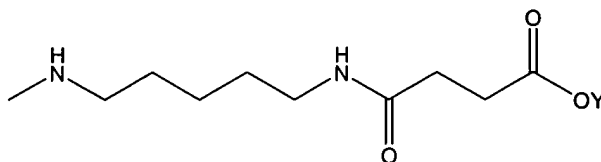
5 X is a member selected from O, S and NR^{50} , wherein

6 R^{50} is a member selected from H, alkyl and substituted alkyl;

7 Y is a member selected from H and a single negative charge; and

8 j ~~an~~ and k are members independently selected from the group consisting of
9 integers from 1 to 18.

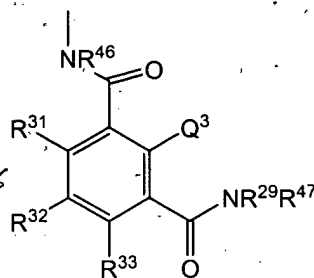
1 **28.** (Original) The compound according to claim 27, wherein said ω -
2 carboxyl substituted alkyl group has a structure according to Formula VIII:



(VIII).

1 **29.** (Original) The compound according to claim 8, wherein R^1 , R^2 , R^5 ,
2 R^6 , R^7 , R^{10} , R^{29} , R^{46} and R^{47} are H.

1 **30.** (Presently Amended) The compound according to claim 5, wherein R^4
2 is an alkyl group substituted with a group having a structure according to Formula II:



(II)

wherein,

R^{29} , R^{46} and R^{47} are members independently selected from the group consisting of H, alkyl, substituted alkyl, and polyether, wherein, two or more of R^1 , R^6 and R^{29} are optionally adjoined by at least one linker moiety to form at least one ring;

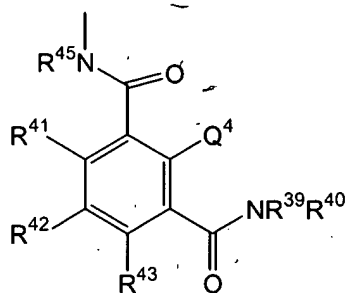
R^{31} , R^{32} and R^{33} are members independently selected from alkyl, substituted alkyl, H, $-\text{NR}^{24}\text{R}^{25}$, $-\text{NO}_2$, $-\text{OR}^{26}$, $-\text{COOR}^{27}$,

wherein, R^{24} , R^{25} , R^{26} and R^{27} are members independently selected from the group consisting of H, alkyl and substituted alkyl, wherein R^{32} can optionally form a ring with R^{31} , R^{33} or both, said rings being members independently selected from the group of ring systems consisting of cyclic alkyl, substituted cyclic alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, and heterocyclyl ring systems; and

Q^3 is $-\text{OR}^{28}$, wherein R^{28} is a member selected from H, an enzymatically labile group, a hydrolytically labile group and a single negative charge; and

R^5 is an alkyl group substituted with a moiety having a structure according to Formula IX:

Formula IX:



(IX)

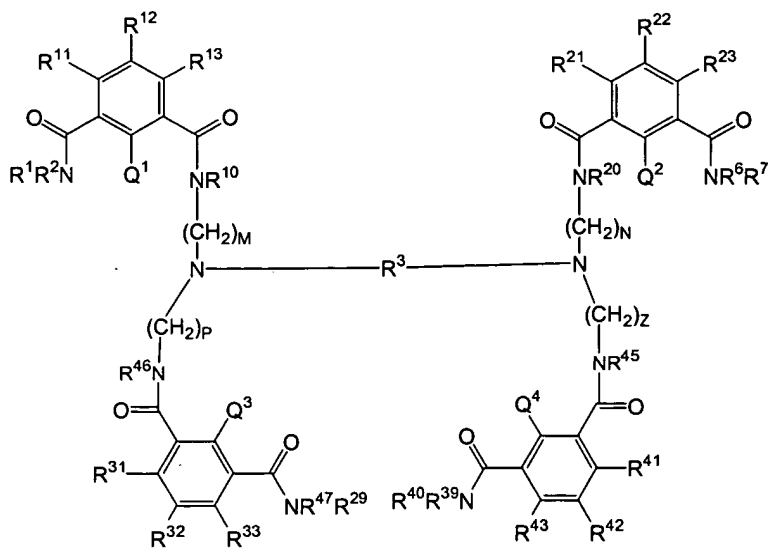
wherein,

R^{39} , R^{40} and R^{45} are members independently selected from alkyl, and substituted alkyl, and polyether, groups; and wherein, two or more of R^1 , R^6 and R^{39} are optionally adjoined by at least one linker moiety to form at least one ring;

R^{41} , R^{42} and R^{43} are members independently selected from alkyl, substituted alkyl, H, $-NR^{34}R^{35}$, $-NO_2$, $-OR^{36}$, $-COOR^{37}$, wherein, R^{34} , R^{35} , R^{36} and R^{37} are members independently selected from the group consisting of H, alkyl and substituted alkyl, wherein R^{42} can optionally form a ring with R^{41} , R^{43} or both, said rings being members independently selected from the group of ring systems consisting of cyclic alkyl, substituted cyclic alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, heterocyclyl and saturated heterocyclyl ring systems; and

Q^4 is $-OR^{38}$, respectively, wherein, R^{38} is a member selected from is a member selected from H and a single negative charge.

31. (Original) A compound according to claim 30, having a structure according to Formula X:



(X)

wherein,

M, N, P and Z are members independently selected from the group consisting of the integers between 1 and 5, inclusive.

32. (Original) The compound according to claim 31, wherein, $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{20}, R^{29}, R^{39}, R^{40}, R^{45}, R^{46}$ and R^{47} are members independently selected from the group consisting of C_1 to C_{10} alkyl and C_1 to C_{10} substituted alkyl.

33. (Original) The compound according to claim 32 wherein, $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{20}, R^{29}, R^{39}, R^{40}, R^{45}, R^{46}$ and R^{47} are members independently selected from the group consisting of C_2 to C_6 alkyl and C_2 to C_6 substituted alkyl.

34. (Original) The compound according to claim 31, wherein $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{20}, R^{29}, R^{39}, R^{40}, R^{45}, R^{46}$ and R^{47} are members independently selected from the group consisting of aryl, substituted aryl and combinations thereof.

35. (Original) The compound according to claim 31, wherein $R^1, R^2, R^3, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{20}, R^{29}, R^{39}, R^{40}, R^{45}, R^{46}$ and R^{47} are members independently selected from the group consisting of alkyl substituted with polycyclic aryl groups.

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1 **36.** (Presently Amended) The compound according to claim 31, wherein a
2 member selected from the group consisting of R^1 , R^2 , R^5 , R^6 , R^7 , R^8 , R^9 , R^{10} , R^{20} , R^{29} , R^{39} ,
3 R^{40} , R^{45} , R^{46} and R^{47} and combinations thereof is a primary alkyl amine.

1 **37.** (Presently Amended) The compound according to claim ~~34~~ 36,
2 wherein said primary alkyl amine as is a C_1 to C_{10} alkyl chain bearing an amine moiety at the
3 ω -position.

1 **38.** (Original) The compound according to claim 37, wherein said primary
2 alkyl amine as a C_2 to C_6 alkyl chain bearing an amine moiety at the ω -position.

1 **39.** (Original) The compound according to claim 31, wherein a member
2 selected from the group consisting of R^1 , R^2 , R^6 , R^7 , R^{10} , R^{20} , R^{29} , R^{39} , R^{40} , R^{45} , R^{46} and R^{47}
3 and combinations thereof is a polyether.

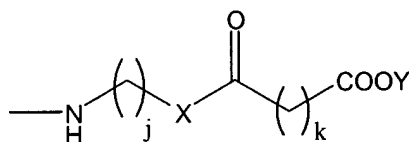
1 **40.** (Original) The compound according to claim 39, wherein said
2 polyether is a member selected from ethylene glycol, ethylene glycol oligomers and
3 combinations thereof, wherein said polyether has a molecular weight of from about 60
4 daltons to about 10,000 daltons.

1 **41.** (Original) The compound according to claim 39, wherein said
2 polyether has a molecular weight of from about 100 daltons to about 1,000 daltons.

1 **42.** (Original) The compound according to claim 31, wherein R^1 , R^2 , R^6 ,
2 R^7 , R^{10} , R^{20} , R^{29} , R^{39} , R^{40} , R^{45} , R^{46} and R^{47} and combinations thereof are members selected
3 from ω -carboxyl alkyl groups, ω -carboxyl substituted alkyl groups and combinations thereof.

1 **43.** (Original) The compound according to claim 42, wherein said ω -
2 carboxyl substituted alkyl group has a structure according to Formula VII:

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(VII)

wherein,

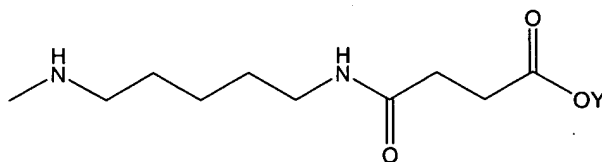
X is a member selected from O, S and NR^{50} , wherein

R^{50} is a member selected from H, alkyl and substituted alkyl;

Y is a member selected from H and a single negative charge; and

j and k are members independently selected from the group consisting of integers from 1 to 18.

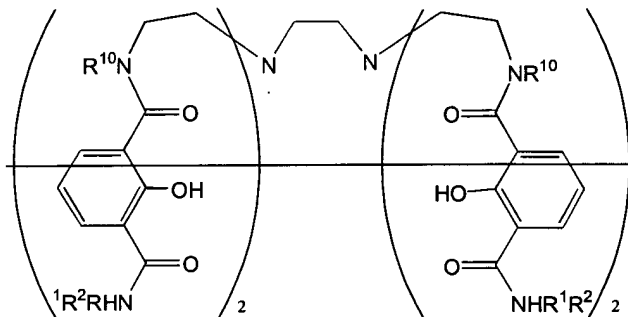
44. (Original) The compound according to claim 43, wherein said ω -carboxyl substituted alkyl group has a structure according to Formula VIII:



(VIII).

45. (Original) The compound according to claim 31, wherein R^1 , R^2 , R^6 , R^7 , R^{10} , R^{20} , R^{29} , R^{39} , R^{40} , R^{45} , R^{46} and R^{47} are H.

46. (Presently Amended) A compound according to claim 31, wherein R^3 is $-(\text{CH}_2)_2-$ having a structure according to Formula XI:

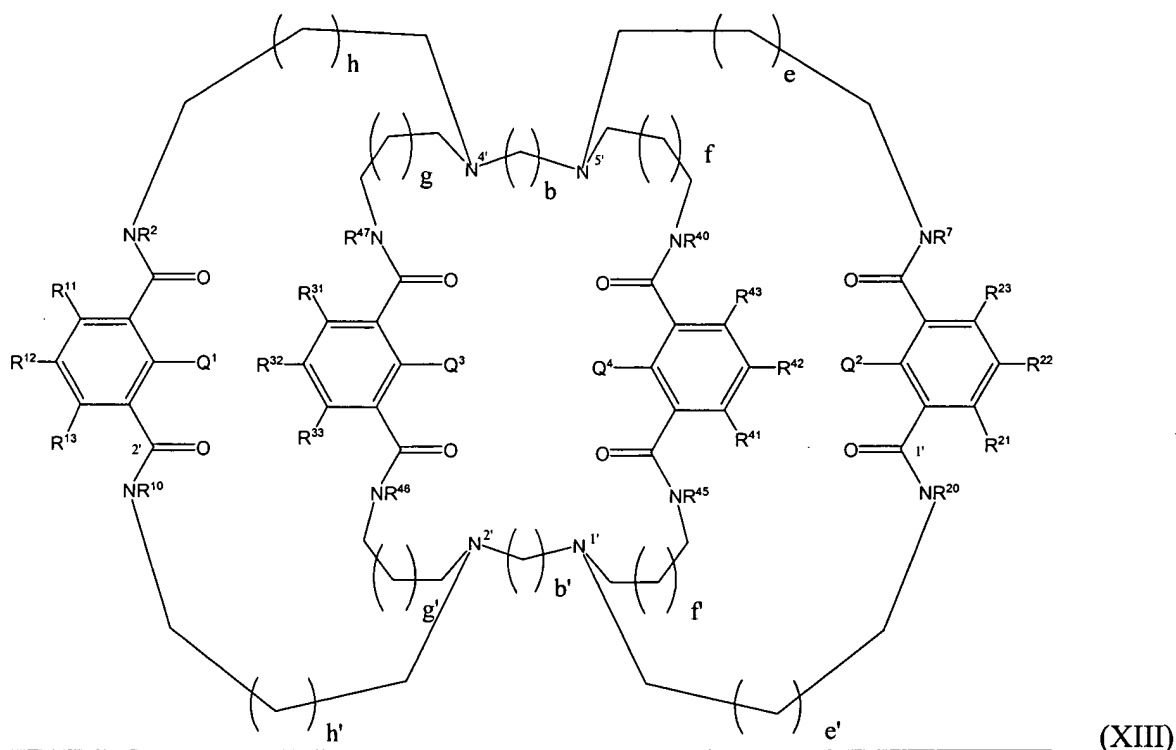


(XI).

47. (Cancelled)

b, e, f, g and h are members independently selected from the numbers between 1 and 5, inclusive.

The diagram shows a macrocyclic compound with four benzophenone units linked by amide bonds. The units are connected in a chain, with the first and last units also connected to form a closed ring. Each benzophenone unit has a central carbon atom bonded to two phenyl rings. The phenyl rings are substituted with various groups: R^{11} , R^{12} , R^{13} , R^{10} , R^{31} , R^{32} , R^{33} , R^{46} , R^{43} , R^{41} , R^{45} , R^{23} , R^{21} , R^{20} , R^{47} , R^{32} , R^{42} , R^{21} , R^{20} , R^{45} , R^{43} , R^{41} , R^{46} , R^{33} , R^{31} , R^{11} , R^{12} , R^{13} , R^{10} . The amide bonds are labeled with Q^1 , Q^2 , Q^3 , and Q^4 . The nitrogen atoms are labeled with R^2 , R^7 , R^{10} , R^{20} , R^{21} , R^{23} , R^{45} , R^{46} , R^{47} , R^{48} , R^{49} , R^{50} , R^{51} , R^{52} , R^{53} , R^{54} , R^{55} , R^{56} , R^{57} , R^{58} , R^{59} , R^{60} , R^{61} , R^{62} , R^{63} , R^{64} , R^{65} , R^{66} , R^{67} , R^{68} , R^{69} , R^{70} , R^{71} , R^{72} , R^{73} , R^{74} , R^{75} , R^{76} , R^{77} , R^{78} , R^{79} , R^{80} , R^{81} , R^{82} , R^{83} , R^{84} , R^{85} , R^{86} , R^{87} , R^{88} , R^{89} , R^{90} , R^{91} , R^{92} , R^{93} , R^{94} , R^{95} , R^{96} , R^{97} , R^{98} , R^{99} , R^{100} . The repeating units are labeled with h , e , f , g , h' , e' , f' , g' .



wherein,

$R^2, R^7, R^{10}, R^{20}, R^{40}, R^{45}, R^{46}$, and R^{47} are members independently selected from the group consisting of H, alkyl, and substituted alkyl;

$R^{11}, R^{12}, R^{13}, R^{21}, R^{22}, R^{23}, R^{31}, R^{32}, R^{33}, R^{41}, R^{42}$ and R^{43} are members independently selected from alkyl, substituted alkyl, H, $NR^{10}R^{11}$, NO_2 , OR^{12} , $COOR^{13}$, or two or more of R^5, R^6 and R^7 are joined to form a ring system, which is a member selected from cyclic alkyl, substituted cyclic alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, heterocyclyl and saturated heterocyclyl systems;

Q^1, Q^2, Q^3 and Q^4 are $OR^{18}, OR^{19}, OR^{28}, OR^{38}$, respectively, wherein, R^{18}, R^{19}, R^{28} and R^{38} are members independently selected from H, and a single negative charge;

b and b' are members independently selected from the group consisting of the integers from 1 to 5, inclusive; and

19 e, e', f, f', g, g', h and h' are members independently selected from the group
20 consisting of numbers from 0 to 3.

1 50. (Original) The compound according to claim 49 wherein, R², R⁷, R¹⁰,
2 R²⁰, R⁴⁰, R⁴⁵, R⁴⁶, and R⁴⁷ are members independently selected from the group consisting of
3 C₁ to C₁₀ alkyl and C₁ to C₁₀ substituted alkyl.

1 51. (Original) The compound according to claim 50 wherein, R², R⁷, R¹⁰,
2 R²⁰, R⁴⁰, R⁴⁵, R⁴⁶, and R⁴⁷ are members independently selected from the group consisting of
3 C₂ to C₆ alkyl and C₂ to C₆ substituted alkyl.

1 52. (Original) The compound according to claim 49, wherein R², R⁷, R¹⁰,
2 R²⁰, R⁴⁰, R⁴⁵, R⁴⁶, and R⁴⁷ are members independently selected from the group consisting of
3 aryl, substituted aryl and combinations thereof.

1 53. (Original) The compound according to claim 52, wherein R², R⁷, R¹⁰,
2 R²⁰, R⁴⁰, R⁴⁵, R⁴⁶, and R⁴⁷ are members independently selected from the group consisting of
3 alkyl substituted with polycyclic aryl groups.

1 54. (Original) The compound according to claim 49, wherein a member
2 selected from the group consisting of R², R⁷, R¹⁰, R²⁰, R⁴⁰, R⁴⁵, R⁴⁶, and R⁴⁷ and
3 combinations thereof is a primary alkyl amine.

1 55. (Original) The compound according to claim 54, wherein said primary
2 alkyl amine as a C₁ to C₁₀ alkyl chain bearing an amine moiety at the ω-position.

b1 1 56. (Original) The compound according to claim 55, wherein said primary
2 alkyl amine as a C₂ to C₆ alkyl chain bearing an amine moiety at the ω-position.

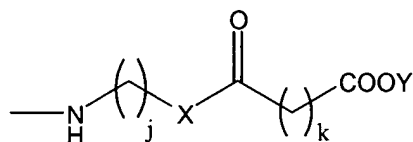
1 57. (Original) The compound according to claim 49, wherein a member
2 selected from the group consisting of R², R⁷, R¹⁰, R²⁰, R⁴⁰, R⁴⁵, R⁴⁶, and R⁴⁷ and
3 combinations thereof is a polyether.

1 **58.** (Original) The compound according to claim 57, wherein said
2 polyether is a member selected from ethylene glycol, ethylene glycol oligomers and
3 combinations thereof, wherein said polyether has a molecular weight of from about 60
4 daltons to about 10,000 daltons.

1 **59.** (Original) The compound according to claim 58, wherein said
2 polyether has a molecular weight of from about 100 daltons to about 1,000 daltons.

1 **60.** (Original) The compound according to claim 49, wherein R^2 , R^7 , R^{10} ,
2 R^{20} , R^{40} , R^{45} , R^{46} , and R^{47} and combinations thereof are members selected from ω -carboxyl
3 alkyl groups, ω -carboxyl substituted alkyl groups and combinations thereof.

1 **61.** (Presently Amended) The compound according to claim 60, wherein
2 said ω -carboxyl substituted alkyl group has a structure according to Formula VII:



(VII)

4 wherein,

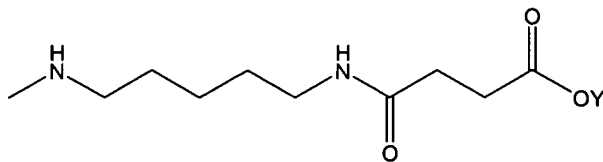
5 X is a member selected from O, S and NR^{50} , wherein

6 R^{50} is a member selected from H, alkyl and substituted alkyl;

7 Y is a member selected from H and a single negative charge; and

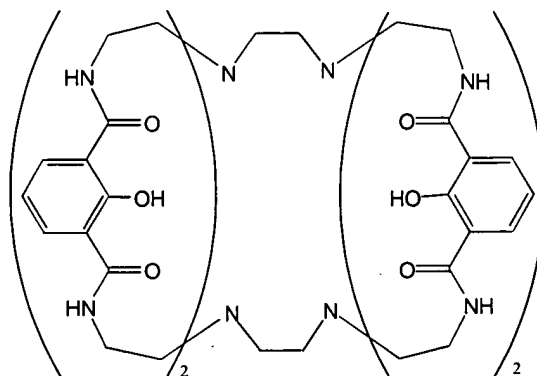
8 j ~~an~~ and k are members independently selected from the group consisting of
9 integers from 1 to 18.

1 **62.** (Original) The compound according to claim 61, wherein said ω -
2 carboxyl substituted alkyl group has a structure according to Formula VIII:



(VIII).

- 1 **63.** (Previously Amended) The compound according to claim 49, having a
2 structure according to Formula XIV:



(XIV).

- 1 **64-123.** (Cancelled)